

WHAT IS CLAIMED IS:

1. A print control apparatus for performing a printing operation in accordance with print data received from an information processing apparatus, comprising:

storing means for storing print data included in a print job;

printing-in-original-layout means for performing a printing process such that one logical page is printed on one printing medium in accordance with said print data;

printing-in-modified-layout means for performing a printing process such that a plurality of logical pages are printed on one printing medium in accordance with said print data; and

deleting control means which retains the print data in said storing means after one of the printing processes is completed and which deletes the print data from said storing means when both printing processes are completed.

2. A print control apparatus according to Claim 1, wherein

said printing-in-modified-layout means performs printing in a modified layout in which a plurality of logical pages are printed on one printing medium so as to produce as many sets of copies as specified in the print

043301 043301 043301

data; and

said deleting control means deletes the print data from  
said storing means when the printing in the modified layout  
for producing the specified number of sets of copies is  
completed.

3. A print control apparatus according to Claim 1,  
further comprising:

inputting means for inputting a command to specify that  
printing should be performed in a presentation mode; and

control means for controlling the respective printing  
means such that when the command specifying the presentation  
mode is input via said inputting means, both said printing  
in the original layout and said printing in a modified  
layout are executed for a single print job, while when the  
command specifying the presentation mode is not input via  
said inputting means, printing is executed in a specified  
layout for a single print job.

4. A method for controlling a print control apparatus  
for performing a printing operation in accordance with print  
data received from an information processing apparatus, said  
method comprising:

a storing step for storing print data included in a  
print job;



a control step for controlling the respective printing step such that when the command specifying the presentation mode is input in said inputting step, both said printing in the original layout and said printing in a modified layout are executed for a single print job, while when the command specifying the presentation mode is not input in said inputting step, printing is executed in a specified layout for a single print job.

```

    spooling means for temporarily storing input data to be
printed;

```

image representing data producing means for, in the case where said determining means determines that a predetermined printing mode has been set, producing first image representing data to be subjected to first formatting and second image representing data to be subjected to second formatting, on the basis of the data stored in said spooling means; and

```
print data producing means for producing one set of
```

print data from the first image representing data and the second image representing data produced by said image representing data producing means.

8. An information processing apparatus according to Claim 7, wherein said first formatting is a process of placing one logical page of said data to be printed on one logical page of image representing data and said second formatting is a process of placing a plurality of logical pages of said data to be printed on one logical page of image representing data.

9. An information processing apparatus according to Claim 8, wherein  
said image representing data is a GDI function;  
said image representing data producing means outputs the generated image representing data to image representing means of an operating system; and

said print data producing means produces print data depending upon a printer language in accordance with the GDI function received from the image representing means of the operating system.

10. An information processing apparatus according to Claim 7, further comprising: deleting control means which

11. An information processing apparatus according to Claim 7, further comprising: printing manner setting means capable of performing setting associated with the first formatting and the second formatting at the same time via a user interface window.

13. An information processing apparatus according to Claim 11, wherein

said image representing data producing means produces presentation copy data to be subjected to first formatting and also produces distribution document data to be subjected to second formatting.

14. An information processing apparatus according to

Claim 13, wherein

said printing manner setting means is capable of setting the number of sets of distribution copy data; and

said image representing data producing means produces as many sets of distribution copy data to be subjected to the second formatting as the number of sets specified by said printing manner setting means.

15. An information processing apparatus according to Claim 13, wherein said printing manner setting means is capable of further specifying whether a memo space is to be inserted into the distribution copy data, and wherein in the case where a memo space is specified to be inserted, said printing manner setting means produces image representing data including a logical page representing a memo space when producing the distribution copy data.

16. A method of controlling an information processing apparatus for producing print data to be printed by a printing apparatus, said method comprising:

a spooling step for temporarily storing input data to be printed;

a determining step for determining a printing mode which has been set;

a image representing data producing step for, in the

case where it is determined in said determining step that a predetermined printing mode has been set, producing first image representing data to be subjected to first formatting and second image representing data to be subjected to second formatting, on the basis of the data stored in said spooling step; and

a print data producing step for producing one set of print data from the first image representing data and the second image representing data produced in said image representing data producing step.

17. A method according to Claim 16, wherein  
said first formatting is a process of placing one logical page of said data to be printed on one logical page of image representing data and said second formatting is a process of placing a plurality of logical pages of said data to be printed on one logical page of image representing data.

18. A method according to Claim 17, wherein  
said image representing data is a GDI function;  
said image representing data producing step outputs the generated image representing data to image representing means of an operating system; and

said print data producing step produces print data depending upon a printer language in accordance with the GDI



function received from the image representing means of the operating system.

19. A method according to Claim 7, further comprising a deleting control step in which the data to be printed, stored in said spooling step, is retained after one of the formatting processes is completed and the data is deleted when both formatting processes are completed.

20. A method according to Claim 16, further comprising a printing manner setting step capable of performing setting associated with the first formatting and the second formatting at the same time via a user interface window.

21. A method according to Claim 20, wherein said printing manner setting step is capable of setting a page layout in the formatting.

22. A method according to Claim 20, wherein said predetermined printing mode is a presentation mode; and

said image representing data producing step produces presentation copy data to be subjected to first formatting and also produces distribution document data to be subjected to second formatting.

09839458-042301

23. A method according to Claim 22, wherein  
said printing manner setting step is capable of setting  
the number of sets of distribution copy data; and  
said image representing data producing step produces as  
many sets of distribution copy data to be subjected to the  
second formatting as the number of sets specified in said  
printing manner setting step.

24. A method according to Claim 22, wherein said  
printing manner setting step is capable of further  
specifying whether a memo space is to be inserted into the  
distribution copy data, and wherein in the case where a memo  
space is specified to be inserted, said printing manner  
setting step produces image representing data including a  
logical page representing a memo space when producing the  
distribution copy data.

25. A storage medium on which a printer driver program  
for producing print data to be printed by a printing  
apparatuses stored, said printer driver program comprising:  
a spooling step for temporarily storing input data to  
be printed;  
a determining step for determining a printing mode  
which has been set;

a image representing data producing step for, in the case where it is determined in said determining step that a predetermined printing mode has been set, first image representing data to be subjected to first formatting and second image representing data to be subjected to second formatting are produced on the basis of said data stored; and

a print data producing step for producing one set of print data from the first image representing data and the second image representing data produced in said image representing data producing step.

26. A storage medium according to Claim 25, wherein said first formatting is a process of placing one logical page of said data to be printed on one logical page of image representing data and said second formatting is a process of placing a plurality of logical pages of said data to be printed on one logical page of image representing data.

27. A storage medium according to Claim 26, wherein said image representing data is a GDI function; said image representing data producing step outputs the generated image representing data to image representing means of an operating system; and said print data producing step produces print data

depending upon a printer language in accordance with the GDI function received from the image representing means of the operating system.

28. A storage medium according to Claim 25, said printer driver program further comprising a deleting control step in which the data to be printed, stored in said spooling step, is retained after one of the formatting processes is completed and the data is deleted when both formatting processes are completed.

29. A storage medium according to Claim 25, said printer driver program further comprising printing manner setting step capable of performing setting associated with the first formatting and the second formatting at the same time via a user interface window.

30. A storage medium according to Claim 29, wherein said printing manner setting step is capable of setting a page layout in the formatting.

31. A storage medium according to Claim 29, wherein said predetermined printing mode is a presentation mode; and

said image representing data producing step produces

presentation copy data to be subjected to first formatting and also produces distribution document data to be subjected to second formatting.

32. A storage medium according to Claim 31, wherein said printing manner setting step is capable of setting the number of sets of distribution copy data; and

said image representing data producing step produces as many sets of distribution copy data to be subjected to the second formatting as the number of sets specified in said printing manner setting step.

33. A storage medium according to Claim 31, wherein said printing manner setting step is capable of further specifying whether a memo space is to be inserted into the distribution copy data, and wherein in the case where a memo space is specified to be inserted, said printing manner setting step produces image representing data including a logical page representing a memo space when producing the distribution copy data.

34. A printer driver program for producing print data to be printed by a printing apparatus, said printer driver program comprising:

a spooling step for temporarily storing input data to

36. A printer driver program according to Claim 35,  
wherein

said image representing data is a GDI function;

said image representing data producing step outputs the generated image representing data to image representing means of an operating system; and

said print data producing step produces print data depending upon a printer language in accordance with the GDI function received from the image representing means of the operating system.

37. A printer driver program according to Claim 34, said printer driver program further comprising: a deleting control step in which the data to be printed, stored in said spooling step, is retained after one of the formatting processes is completed and the data is deleted when both formatting processes are completed.

38. A printer driver program according to Claim 34, said printer driver program further comprising printing manner setting step capable of performing setting associated with the first formatting and the second formatting at the same time via a user interface window.

39. A printer driver program according to Claim 38, wherein said printing manner setting step is capable of setting a page layout in the formatting.

40. A printer driver program according to Claim 39,  
wherein

said predetermined printing mode is a presentation  
mode; and

said image representing data producing step produces  
presentation copy data to be subjected to first formatting  
and also produces distribution document data to be subjected  
to second formatting.

41. A printer driver program according to Claim 40,  
wherein

said printing manner setting step is capable of setting  
the number of sets of distribution copy data; and

said image representing data producing step produces as  
many sets of distribution copy data to be subjected to the  
second formatting as the number of sets specified in said  
printing manner setting step.

42. A printer driver program according to Claim 40,  
wherein said printing manner setting step is capable of  
further specifying whether a memo space is to be inserted  
into the distribution copy data, and wherein in the case  
where a memo space is specified to be inserted, said  
printing manner setting step produces image representing





46. An information processing apparatus according to Claim 43, wherein said setting means is capable of setting an arbitrary combination of output formats.

47. An information processing apparatus according to Claim 43, wherein said producing means comprises:

storing means for storing, in a predetermined data format, said data to be printed and output form information indicating the plurality of output format set by said setting means;

converting means for converting the data to be printed stored in the predetermined data format in said storing means into print data so as to obtain printing outputs in the output formats indicated by the output form information stored in the said storing means; and

print job producing means for producing a plurality of print jobs by producing, using said converting means, print data corresponding to the respective output formats set by said setting means.

48. An information processing apparatus according to Claim 43, wherein said execution control means transmits the print job produced by said producing means to the printing apparatus.

0909159.043301

49. A method of controlling an information processing apparatus for producing print data to be printed by a printing apparatus, said method comprising:

setting step capable of setting a plurality of output formats for one piece of data to be printed;

producing step for producing, from the data to be printed, a plurality of print jobs including print data corresponding to the plurality of output formats set in said setting step; and

execution control step for controlling execution such that printing is executed in accordance with the plurality of print jobs produced in said producing step.

50. A method according to Claim 48, wherein said setting step is capable of setting a combination of predetermined output formats.

51. A method according to Claim 50, wherein said combination of predetermined output formats includes a first output format in which one page is output on one sheet and a second output format in which a plurality of pages are output on one sheet.

52. A method according to Claim 49, wherein said

setting step is capable of setting an arbitrary combination of output formats.

53. A method according to Claim 49, wherein said producing step comprises:

a storing step for storing, in a predetermined data format, said data to be printed and output form information indicating the plurality of output format set in said setting step;

a converting step for converting the data to be printed stored in the predetermined data format in said storing step into print data so as to obtain printing outputs in the output formats indicated by the output form information stored in the said storing step; and

a print job producing step for producing a plurality of print jobs by producing, using said converting step, print data corresponding to the respective output formats set in said setting step.

54. A method according to Claim 49, wherein said execution control step transmits the print job produced in said producing step to the printing apparatus.

55. A storage medium on which a program for producing print data to be printed by a printing apparatus is stored,

said program comprising:

a setting step capable of setting a plurality of output formats for one piece of data to be printed;

a producing step for producing, from the data to be printed, a plurality of print jobs including print data corresponding to the plurality of output formats set in said setting step; and

an execution control step for controlling execution such that printing is executed in accordance with the plurality of print jobs produced in said producing step.

56. A storage medium according to Claim 55, wherein said setting step is capable of setting a combination of predetermined output formats.

57. A storage medium according to Claim 56, wherein said combination of predetermined output formats includes a first output format in which one page is output on one sheet and a second output format in which a plurality of pages are output on one sheet.

58. A storage medium according to Claim 55, wherein said setting step is capable of setting an arbitrary combination of output formats.

09839459.047304  
TOP SECRET



printed, a plurality of print jobs including print data corresponding to the plurality of output formats set in said setting step; and

an execution control step for controlling execution such that printing is executed in accordance with the plurality of print jobs produced in said producing step.

62. A program according to Claim 61, wherein said setting step is capable of setting a combination of predetermined output formats.

63. A program according to Claim 62, wherein said combination of predetermined output formats includes a first output format in which one page is output on one sheet and a second output format in which a plurality of pages are output on one sheet.

64. A program according to Claim 61, wherein said setting step is capable of setting an arbitrary combination of output formats.

65. A program according to Claim 61, wherein said producing step comprises:

a storing step for storing, in a predetermined data format, said data to be printed and output form information

a converting step for converting the data to be printed stored in the predetermined data format in said storing step into print data so as to obtain printing outputs in the output formats indicated by the output form information stored in the said storing step; and

66. A program according to Claim 61, wherein said execution control step transmits the print job produced in said producing step to the printing apparatus.